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Job No.: SCE/BBMP/RL/17/2021-2022

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

17.06.2021

AASHTO T 164 & AASHTO T 30

CLIENT	: Executive Engineer, RR Nagar Division,BBMP, Bangalore.
AGENCY	: Sri. R Lokesh, Contractor, Bangalore.
NAME OF THE WORK	Compreshensive development of roads and drains in Muthyalanagara, LC-4A, Mohankumarnagara, Sundar nagara and surrounding areas in ward no-17 under PACKAGE-2019-20 RRN-DIV-(09)
SAMPLE ID	:Hot Mix Plant, Bangalore
DATE OF TESTING	17.06.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.5	473
3. Weight of Asphalt and Mineral matter Extracted, g	27.5	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.5	27
7. Bitumen content in %	5.50	5.40
8. Average	5.45	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	13.2	13.2	2.8	97.2	90 - 100
9.5	68.9	82.1	17.4	82.6	70 - 88
4.75	95	177.1	37.5	62.5	53 - 71
2.36	45.1	222.2	47.0	53.0	42 - 58
1.18	43.9	266.1	56.3	43.7	34 - 48
0.600	53.5	319.6	67.6	32.4	26 - 38
0.300	48.7	368.3	77.9	22.1	18 - 28
0.150	32.1	400.4	84.7	15.3	12 - 20
0.075	48.2	448.6	94.9	5.1	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	13.5	13.5	2.9	97.1	90 - 100
9.5	68.9	82.4	17.4	82.6	70 - 88
4.75	82.1	164.5	34.8	65.2	53 - 71
2.36	46	210.5	44.5	55.5	42 - 58
1.18	42.1	252.6	53.4	46.6	34 - 48
0.600	58.7	311.3	65.8	34.2	26 - 38
0.300	41.2	352.5	74.5	25.5	18 - 28
0.150	32.3	384.8	81.4	18.6	12 - 20
0.075	46.8	431.6	91.2	8.8	4 - 10

For SAPIENCE CONSULTANTS

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Note:

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SAMPLE ID	:Hot Mix Plant, Bangalore
DATE OF TESTING	17.06.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.7	472.3
3. Weight of Asphalt and Mineral matter Extracted, g	27.3	27.7
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.3	27.7
7. Bitumen content in %	5.46	5.54
8. Average	5.50	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	13.5	13.5	2.9	97.1	90 - 100
9.5	68.9	82.4	17.4	82.6	70 - 88
4.75	92.1	174.5	36.9	63.1	53 - 71
2.36	46.2	220.7	46.7	53.3	42 - 58
1.18	42.1	262.8	55.6	44.4	34 - 48
0.600	50.6	313.4	66.3	33.7	26 - 38
0.300	48.2	361.6	76.5	23.5	18 - 28
0.150	32.1	393.7	83.3	16.7	12 - 20
0.075	46.5	440.2	93.1	6.9	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	12.3	12.3	2.6	97.4	90 - 100
9.5	68.2	80.5	17.0	83.0	70 - 88
4.75	95.6	176.1	37.3	62.7	53 - 71
2.36	42.1	218.2	46.2	53.8	42 - 58
1.18	40.6	258.8	54.8	45.2	34 - 48
0.600	49.8	308.6	65.3	34.7	26 - 38
0.300	40.6	349.2	73.9	26.1	18 - 28
0.150	32.2	381.4	80.8	19.2	12 - 20
0.075	46.2	427.6	90.5	9.5	4 - 10

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AGENCY	: Sri. R Lokesh, Contractor, Bangalore.
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SAMPLE ID	:Hot Mix Plant, Bangalore
DATE OF TESTING	18.06.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	473	472
3. Weight of Asphalt and Mineral matter Extracted, g	27	28
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27	28
7. Bitumen content in %	5.40	5.60
8. Average	5.50	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	14.6	14.6	3.1	96.9	90 - 100
9.5	60.2	74.8	15.8	84.2	70 - 88
4.75	92.1	166.9	35.3	64.7	53 - 71
2.36	48.7	215.6	45.6	54.4	42 - 58
1.18	42.3	257.9	54.5	45.5	34 - 48
0.600	50.1	308	65.1	34.9	26 - 38
0.300	46.2	354.2	74.9	25.1	18 - 28
0.150	32.1	386.3	81.7	18.3	12 - 20
0.075	46.9	433.2	91.6	8.4	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	12.4	12.4	2.6	97.4	90 - 100
9.5	68.9	81.3	17.2	82.8	70 - 88
4.75	92.1	173.4	36.7	63.3	53 - 71
2.36	46.7	220.1	46.6	53.4	42 - 58
1.18	42.1	262.2	55.6	44.4	34 - 48
0.600	50.1	312.3	66.2	33.8	26 - 38
0.300	47.8	360.1	76.3	23.7	18 - 28
0.150	32.1	392.2	83.1	16.9	12 - 20
0.075	45	437.2	92.6	7.4	4 - 10

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SAMPLE ID	:Hot Mix Plant, Bangalore
DATE OF TESTING	19.06.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472	472.5
3. Weight of Asphalt and Mineral matter Extracted, g	28	27.5
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	28	27.5
7. Bitumen content in %	5.60	5.50
8. Average	5.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	15.7	15.7	3.3	96.7	90 - 100
9.5	65.1	80.8	17.1	82.9	70 - 88
4.75	92.3	173.1	36.7	63.3	53 - 71
2.36	45.8	218.9	46.4	53.6	42 - 58
1.18	40.6	259.5	55.0	45.0	34 - 48
0.600	52.1	311.6	66.0	34.0	26 - 38
0.300	47.9	359.5	76.2	23.8	18 - 28
0.150	32.1	391.6	83.0	17.0	12 - 20
0.075	46.9	438.5	92.9	7.1	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	15.6	15.6	3.3	96.7	90 - 100
9.5	62.3	77.9	16.5	83.5	70 - 88
4.75	98.9	176.8	37.4	62.6	53 - 71
2.36	46.1	222.9	47.2	52.8	42 - 58
1.18	40.8	263.7	55.8	44.2	34 - 48
0.600	50.1	313.8	66.4	33.6	26 - 38
0.300	47.8	361.6	76.5	23.5	18 - 28
0.150	32.6	394.2	83.4	16.6	12 - 20
0.075	49.8	444	94.0	6.0	4 - 10

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